

# Comparisons of Job Characteristics

**Focus Occupation:** [Mechanical Engineering Technicians \(17-3027\)](#)

**Associated Occupation:** [Marine Engineers and Naval Architects \(17-2121\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 91

**Focus Occupation:** Mechanical Engineering Technicians (17-3027)  
**Associated Occupation:** Marine Engineers and Naval Architects (17-2121)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Engineering and Technology	5.7	21.2	16.1	<< Extensive education and/or training may be required
Design	5.2	17.6	15.1	< Expanded education and/or training may be required
Mathematics	9.2	15.8	13.1	< Expanded education and/or training may be required
Mechanical	6.8	14.9	18.0	> Current knowledge level is likely sufficient
Computers and Electronics	8.4	14.4	10.8	<< Extensive education and/or training may be required
Physics	4.3	13.5	10.2	<< Extensive education and/or training may be required
Production and Processing	6.0	11.1	12.6	> Current knowledge level is likely sufficient
Building and Construction	4.0	10.6	6.9	<< Extensive education and/or training may be required
Transportation	4.6	8.4	4.2	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 58

**Focus Occupation:** Mechanical Engineering Technicians (17-3027)  
**Associated Occupation:** Marine Engineers and Naval Architects (17-2121)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Operations Analysis	5.0	13.8	6.8	<< Extensive development of skills in this area may be required

Judgment and Decision Making	9.4	13.5	9.5	<<	Extensive development of skills in this area may be required
Mathematics	6.2	13.5	8.4	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	12.8	9.7	<<	Extensive development of skills in this area may be required
Science	4.5	11.2	7.5	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	10.7	7.5	<<	Extensive development of skills in this area may be required
Technology Design	2.6	8.1	3.9	<<	Extensive development of skills in this area may be required
Management of Material Resources	3.7	7.7	2.6	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	7.6	2.5	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 87			
Focus Occupation: Mechanical Engineering Technicians (17-3027) Associated Occupation: Marine Engineers and Naval Architects (17-2121)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	16.4	11.8	<<	Extensive improvement in abilities may be required
Oral Comprehension	12.5	16.0	13.2	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	15.6	12.2	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	14.7	11.4	<<	Extensive improvement in abilities may be required
Problem Sensitivity	11.1	14.4	12.2	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	14.3	11.1	<<	Extensive improvement in abilities may be required
Mathematical Reasoning	6.3	13.6	9.0	<<	Extensive improvement in abilities may be required
Visualization	7.5	13.6	10.2	<<	Extensive improvement in abilities may be required
Number Facility	6.3	12.6	9.7	<<	Extensive improvement in abilities may be required
Originality	7.6	11.8	8.6	<<	Extensive improvement in abilities may be required
Fluency of Ideas	7.6	11.5	9.0	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 83

**Focus Occupation: Mechanical Engineering Technicians (17-3027)**  
**Associated Occupation: Marine Engineers and Naval Architects (17-2121)**

Work Activities	Exclusivity of Activity
Analyze engineering design problems	69
Analyze engineering test data	71
Analyze technical data, designs, or preliminary specifications	47
Calculate engineering specifications	64
Communicate technical information	4
Conduct performance testing	66
Confer with engineering, technical or manufacturing personnel	25
Develop plans for programs or projects	31
Draw prototypes, plans, or maps to scale	57
Estimate cost for engineering projects	69
Evaluate engineering data	60
Inspect facilities or equipment for regulatory compliance	51
Prepare technical reports or related documentation	22
Read blueprints	10
Read technical drawings	7
Test equipment as part of engineering projects or processes	67
Understand engineering data or reports	48
Use drafting or mechanical drawing techniques	50
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 86

**Focus Occupation: Mechanical Engineering Technicians (17-3027)**  
**Associated Occupation: Marine Engineers and Naval Architects (17-2121)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Face and head protection	7
Industry specific software	1
Information exchange software	1
Integrated circuits	18

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.